WHAT IS CLAIMED IS:

1.   A method of communicating information to a physical interface, comprising the steps of:

provding at least an output module for transmitting information and an input module for receiving said information; and

5   configuring said output module and said input module according to communication parameters of a predetermined type of physical interface to which said output module and said input module interface such that communication of said information is facilitated therebetween.

2.   The method of Claim 1, wherein said information in the providing step is communicated with a type of said physical interface, which is an 8B/10B device.

3.   The method of Claim 2, wherein a function mapping register is utilized during the configuring step to provide control words in accordance with said communication parameters of said predetermined type of physical interface.

4.   The method of Claim 1, wherein said information in the providing step is communicated with a type of said physical interface, which is an LVDS device.

5.   The method of Claim 4, wherein a mapping function is not required, and said information is encoded and input directly to said physical interface.

6.   The method of Claim 1, wherein said output module further comprises control logic and one or more registers, said control logic controls said one or more registers in the configuring step in accordance with said communication parameters of said predetermined type of physical interface to which said output module interfaces.

7. The method of Claim 1, wherein said input module further comprises control logic and one or more registers, said control logic controls said one or more registers in the configuring step in accordance with said communication parameters of said predetermined type of physical interface to which said input module interfaces.

8. The method of Claim 1, wherein said input module and said output module each further comprise control logic and one or more registers, said control logic controls said one or more registers in the configuring step in accordance with said communication parameters of said predetermined type of physical interface to which each said output module and said input module interface.

9. The method of Claim 1, wherein said output module further comprises control logic and formatting logic, said control logic controls said formatting logic in the configuring step in accordance with said communication parameters of said predetermined type of physical interface to which said output module interfaces.

10. The method of Claim 1, wherein said input module further comprises control logic and deformatting logic, said control logic controls said deformatting logic in the configuring step in accordance with said communication parameters of said predetermined type of physical interface to which said input module interfaces.

11. The method of Claim 1, wherein said input module comprises input control logic and formatting logic, and said output module further comprises output control logic and deformatting logic, said input control logic controls said formatting logic in the configuring step in accordance with said communication parameters of said predetermined type of physical interface to which said input module interfaces, and said output control logic controls said deformatting logic in the configuring step in accordance with said communication parameters of said predetermined type of physical interface to which each said input module interfaces.

12.   The method of Claim 1, further comprising control logic of said output module in the configuring step such that said control logic causes the insertion of special characters into said information when said information is transmitted from said output module.

13.   The method of Claim 12, wherein said special characters are inserted into said information in the configuring step to compensate for clock frequency variations between said output module and said physical interface.

14.   The method of Claim 12, wherein said special characters are inserted into said information in the configuring step to delimit said information transmitted from said output module to said physical interface.

15.   The method of Claim 1, further comprising the step of synchronizing said output and input modules with said physical interface when a loss of synchronization is detected.

16.   The method of Claim 15, wherein said output module triggers said physical interface to initiate the synchronizing step when said loss of synchronization is detected.

17.   The method of Claim 15, wherein said loss of synchronization in the synchronizing step is caused by a power-up event.

18.   The method of Claim 15, wherein said loss of synchronization in the synchronizing step is caused by a hot-swap event.

19. The method of Claim 15, wherein when said loss of synchronization is detected, a synchronizing message pattern is transmitted repeatedly from said output module to said corresponding physical interface during the synchronizing step until resynchronization occurs.

20. The method of Claim 1, wherein special characters are utilized with said information in the configuring step such that said information is compatibly communicated in accordance with said communication parameters of said type of physical interface to which both said output and input modules interface.

21. The method of Claim 1, wherein a mapping function occurs in both said output module and said input module in the configuring step such that said mapping function in said output module occurs between transmit control logic and a transmit register of said output module to communicate said information to said physical interface according transmit communication parameters, and such that said mapping function in said input module occurs between receive control logic and a receive register of said input module to interpret said information received from said physical interface according to communication parameters of said physical interface.

22. An apparatus for communicating information to a physical interface, comprising:

at least an output module for transmitting information and an input module for receiving said information; and

wherein said output module and said input module are each configured according to communication parameters of a predetermined type of the physical interface to which said output module and said input module interface such that communication of said information is facilitated therebetween.

23. The apparatus of Claim 22, wherein said information is communicated with a type of said physical interface that is an 8B/10B device.

24. The apparatus of Claim 24, wherein a function mapping register is utilized to provide control words in accordance with said communication parameters of said predetermined type of physical interface.

25. The apparatus of Claim 22, wherein said information is communicated with a type of said physical interface that is an LVDS device.

26. The apparatus of Claim 25, wherein a mapping function is not required, and said information is encoded and input directly to said physical interface.

27. The apparatus of Claim 22, wherein said output module further comprises control logic and one or more registers, said control logic controls said one or more registers in accordance with said communication parameters of said predetermined type of physical interface to which said output module interfaces.

28. The apparatus of Claim 22, wherein said input module further comprises control logic and one or more registers, said control logic controls said one or more registers in accordance with said communication parameters of said predetermined type of physical interface to which said input module interfaces.

29. The apparatus of Claim 22, wherein said input module and said output module each further comprise control logic and one or more registers, said control logic controls said one or more registers in accordance with said communication parameters of said predetermined type of physical interface to which each said output module and said input module interface.

30.   The apparatus of Claim 22, wherein said output module further comprises control logic and formatting logic, said control logic controls said formatting logic in accordance with said communication parameters of said predetermined type of physical interface to which said output module interfaces.

31.   The apparatus of Claim 22, wherein said input module further comprises control logic and deformatting logic, said control logic controls said deformatting logic in accordance with said communication parameters of said predetermined type of physical interface to which said input module interfaces.

32.   The apparatus of Claim 22, wherein said input module comprises input control logic and formatting logic, and said output module further comprises output control logic and deformatting logic, said input control logic controls said formatting logic in accordance with said communication parameters of said predetermined type of physical interface to which said input module interfaces, and said output control logic controls said deformatting logic in accordance with said communication parameters of said predetermined type of physical interface to which each said input module interfaces.

33.   The apparatus of Claim 22, further comprising control logic of said output module such that said control logic causes the insertion of special characters into said information when said information is transmitted from said output module.

34.   The apparatus of Claim 33, wherein said special characters are inserted into said information to compensate for clock frequency variations between said output module and said physical interface.

35.   The apparatus of Claim 33, wherein said special characters are inserted into said information to delimit said information transmitted from said output module to said physical interface.

36.   The apparatus of Claim 22, wherein said output and input modules are resynchronized with said physical interface after a loss of synchronization is detected.

37.   The apparatus of Claim 36, wherein said output module triggers said physical interface to initiate when said loss of synchronization is detected.

38.   The apparatus of Claim 36, wherein said loss of synchronization is caused by a power-up event.

39.   The apparatus of Claim 36, wherein said loss of synchronization is caused by a hot-swap event.

40.   The apparatus of Claim 36, wherein when said loss of synchronization is detected, a synchronizing message pattern is transmitted repeatedly from said output module to said corresponding physical interface until resynchronization occurs.

41.   The apparatus of Claim 22, wherein special characters are utilized with said information such that said information is compatibly communicated in accordance with said communication parameters of said type of physical interface to which both said output and input modules interface.

42.   The apparatus of Claim 22, wherein a mapping function occurs in both said output module and said input module such that said mapping function in said output module occurs between transmit control logic and a transmit register of said output module to communicate said information to said physical interface according transmit communication parameters, and such that said mapping function in said input module occurs between receive control logic and a receive register of said input module to interpret said information received from said physical interface according to communication parameters of said physical interface.

43.   A method of controlling a physical interface device, comprising the steps of:

providing a transmit module and a receive module for the communication of information therebetween;

controlling a register of said transmit module with control logic such that register information of said register is configured in a predetermined manner according to a type of the physical interface device; and

transmitting said information and said register information from said transmit module to the physical interface device in said predetermined manner such that the physical interface communicates said information to said receive module.

44.   The method of Claim 43, wherein the physical interface device is a 8B/10B device.

45.   The method of Claim 44, wherein a function mapping register is utilized during the controlling step to provide control words in accordance with said 8B/10B device.

46.   The method of Claim 45, wherein the physical interface device is an LVDS device.

47.   The method of Claim 46, wherein a mapping function is not required, and said information is encoded and input directly to said LVDS device.